

## < TEST

**Biology** Chemistry Physics English

1) The protection of internal environment from the harms of extreme temperature in external environment is called:

- A) Excretion
- B) Thermoregulation
- C) Osmoregulation
- D) Homeostasis

☐ A ☐ B ☐ C ☐ D

2) Pick up the one which fluctuates without protection:

- A) Internal environment
- B) External environment
- C) Intracellular environment
- D) Intercellular environment

☐ A ☐ B ☐ C ☐ D

3) Shivering thermogenesis occurs when our body suffers from:

- A) Net loss of water
- B) Net gain of water
- C) Net loss of heat
- D) Net gain of heat

☐ A ☐ B ☐ C ☐ D

4) Homeostasis of nitrogenous wastes cannot be attained without:

- A) Conserving glucose
- B) Losing glucose
- C) Conserving water
- D) Losing water

☐ A ☐ B ☐ C ☐ D

5) Homeostasis means keeping internal environment:

- A) Absolutely constant
- B) Relatively constant
- C) Absolutely fixed
- D) Massively fluctuating

☐ A ☐ B ☐ C ☐ D

6) Urethra empties near the \_\_\_\_\_ in females or through the \_\_\_\_\_ in males:

- A) Bladder, penis
- B) Vagina, bladder
- C) Vagina, penis
- D) Urinogenital duct, penis

☐ A ☐ B ☐ C ☐ D

7) Liver is involved in the \_\_\_\_\_ of nitrogenous wastes to assist the kidneys in their disposal:

- A) Removal
- C) Dilution

A) Removal  
B) Synthesis

C) Excretion  
D) Concentration

☐ A ☐ B ☐ C ☐ D

8) Homeostasis \_\_\_\_\_ in internal environment of an organism:

A) Lowers the temperature  
B) Lowers the water potential  
C) Lowers the solute potential  
D) Lowers the fluctuation

☐ A ☐ B ☐ C ☐ D

9) Adaptation to lower level of range in dry conditions and to higher level of range in abundant supply of water is called:

A) Homeostasis  
B) Feedback mechanism  
C) Osmoregulation  
D) Excretion

☐ A ☐ B ☐ C ☐ D

10) Part of brain associated with thermoregulation is called:

A) Thalamus  
B) Hypothalamus  
C) Limbic system  
D) Hippocampus

☐ A ☐ B ☐ C ☐ D

11) Which one of the following have no link with excretion?

A) Urethra  
B) Vagina  
C) Ureters  
D) Urinary bladder

☐ A ☐ B ☐ C ☐ D

12) In mammals \_\_\_\_\_ have been adapted for thermoregulation:

A) Liver  
B) Urinary bladder  
C) Kidney  
D) Skin

☐ A ☐ B ☐ C ☐ D

13) Vasodilation is a part of:

A) Excretory strategy  
B) Homeostatic strategy  
C) Thermoregulatory strategy  
D) Osmoregulatory strategy

☐ A ☐ B ☐ C ☐ D

14) The part of excretory system that can play a genital role is:

A) Ureter  
B) Urethra  
C) Urinary bladder  
D) Nephron

☐ A ☐ B ☐ C ☐ D

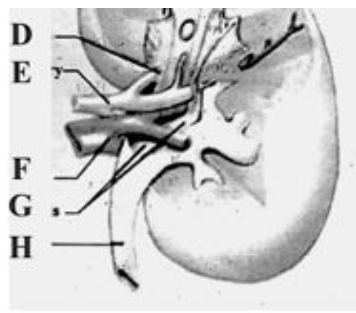
15) Diuresis can be checked by the action of:

A) Aldosterone  
B) ADH  
C) Cortical nephron  
D) Oxytocin

☐ A ☐ B ☐ C ☐ D

16) Name the structure indicated by 'A' in figure given below:





- A) Cortex  
B) Medulla  
C) Renal pyramid  
D) Renal hilum

☐ A ☐ B ☐ C ☐ D

**17) Nitrogenous wastes acquire following route from the human body to the outside:**

- A) Kidney→ureter→urinary bladder→urethra  
B) Urinary bladder→kidney→ureter→urethra  
C) Kidney→urethra→urinary bladder→ureter  
D) Kidney→ureter→urethra→urinary bladder

☐ A ☐ B ☐ C ☐ D

**18) Name the blood capillaries having arterioles at their both ends:**

- A) Systemic capillaries  
B) Glomerular capillaries  
C) Alveolar capillaries  
D) Sinusoid capillaries

☐ A ☐ B ☐ C ☐ D

**19) Maximum reabsorption from glomerular filtrate occurs, while passing through:**

- A) Proximal tubule  
B) Descending loop of Henle  
C) Distal tubule  
D) Ascending loop of Henle

☐ A ☐ B ☐ C ☐ D

**20) Counter current multiplier causes following things, EXCEPT:**

- A) Gradual osmotic outflow of water from filtrate back to kidney  
B) Concentration of filtrate  
C) Gradual increase in the osmotic concentration from cortex to inner medulla  
D) Gradual increase in the osmotic concentration from medulla to outer cortex

☐ A ☐ B ☐ C ☐ D

**21) The production of concentrated urine is an indication of:**

- A) Water constraint to the body  
B) Hypotonic body fluids  
C) More frequent urination  
D) Over production of urine

☐ A ☐ B ☐ C ☐ D

**22) Urea is detoxified form of:**

- A) Creatine  
B) Uric acid  
C) Urea  
D) Ammonia

☐ A ☐ B ☐ C ☐ D

**23) Lower quantities of nitrogen are excreted in the form of following compounds, EXCEPT:**

- A) Creatinine  
B) Creatine  
C) Hypoxanthine  
D) Trimethylamine oxide



☐ A ☐ B ☐ C ☐ D

**24) Funnel like proximal part of ureter is called:**

- A) Renal pyramid C) Renal pelvis  
B) Renal Hilus D) Renal medulla

☐ A ☐ B ☐ C ☐ D

**25) The main nitrogenous excretory product of humans is:**

- A) Ammonia C) Creatine  
B) Urea D) Uric acid

☐ A ☐ B ☐ C ☐ D

**26) Following are true about urethra, EXCEPT:**

- A) It is used to expel urine in human male  
B) It is used to expel urine in human female  
C) It plays a genital role in human male  
D) It plays a genital role in human female

☐ A ☐ B ☐ C ☐ D

**27) Blood is drained from a kidney by:**

- A) Afferent arteriole C) Renal artery  
B) Efferent arteriole D) Renal vein

☐ A ☐ B ☐ C ☐ D

**28) The entry and exit point of kidney is:**

- A) Renal hilus C) Renal capsule  
B) Renal pelvis D) Renal pyramid

☐ A ☐ B ☐ C ☐ D

**29) Following substances are reabsorbed from glomerular filtrate while passing through proximal tubule, EXCEPT:**

- A) Glucose C) Urea  
B) Amino acids D) Water

☐ A ☐ B ☐ C ☐ D

**30) Production of large volume of urine indicates following, EXCEPT:**

- A) Oversecretion of ADH  
B) Hypotonic body fluids  
C) Undersecretion of ADH  
D) Increased intake of water

☐ A ☐ B ☐ C ☐ D

**31) Ureteral orifices prevent the entry of urine from:**

- A) Ureters to urinary bladder  
B) Urinary bladder to ureters  
C) Urinary bladder to urethra  
D) Urethra to urinary bladder

☐ A ☐ B ☐ C ☐ D

**32) Which one of the following activity of kidney depends upon adrenal gland?**

- A) Retention of water C) Urine formation  
B) Retention of salts D) Tubular secretion

☐ A ☐ B ☐ C ☐ D

- 33) Active uptake of water occurs in:**  
A) Descending limb of loop of Henle  
B) Ascending limb of loop of Henle  
C) Urine collecting duct  
D) Proximal tubule

☐ A ☐ B ☐ C ☐ D

- 34) Mostly excess nitrogen is excreted by animals in following forms, EXCEPT:**

A) Urea  
B) Uric acid  
C) Ammonia  
D) Xanthine

☐ A ☐ B ☐ C ☐ D

- 35) For excretion of one gram of ammonia, about \_\_\_\_\_ water is needed:**

A) 500ml  
B) 5000 ml  
C) 50 ml  
D) 01 ml

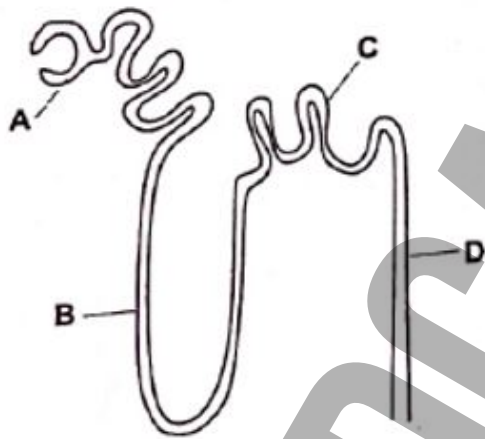
☐ A ☐ B ☐ C ☐ D

- 36) The filtrate appearing in the Bowman's capsule normally lacks:**

A) Amino acids  
B) Glucose  
C) Urea  
D) Erythrocytes

☐ A ☐ B ☐ C ☐ D

- 37) Given below is the diagram of nephron without vascular supply.**



**What is the name of part C?**

A) Collecting tubule  
B) Proximal tubule  
C) Distal tubule  
D) Loop of Henle

☐ A ☐ B ☐ C ☐ D

- 38) Blood is supplied to peritubular capillaries from:**

A) Afferent arteriole  
B) Efferent arteriole  
C) Vasa recta  
D) Renal artery

☐ A ☐ B ☐ C ☐ D

- 39) Homeostatic control system of a cell keeps the fluctuation in extracellular environment in:**

A) Wide range  
B) Narrow range  
C) Extremely narrow range  
D) Extremely wide range

☐ A ☐ B ☐ C ☐ D

**40) Kidneys get almost \_\_\_\_\_ % more blood than their due share on the basis of their percentage weight:**

- A) 20  
B) 01  
C) 19  
D) 10

☐ A ☐ B ☐ C ☐ D

**41) \_\_\_\_\_ can be retained in the human body in greater amounts than \_\_\_\_\_:**

- A) Nitrogen, ammonia  
B) Ammonia, urea  
C) Ammonia, uric acid  
D) Urea, ammonia

☐ A ☐ B ☐ C ☐ D

**42) Posterior pituitary is associated with conservation of water as:**

- A) It produces ADH  
B) It produces oxytocin  
C) It releases oxytocin  
D) It releases ADH

☐ A ☐ B ☐ C ☐ D

**43) By compelling adaptations homeostasis contributes in:**

- A) Reproductive process  
B) Respiratory process  
C) Evolutionary process  
D) Development process

☐ A ☐ B ☐ C ☐ D

**44) \_\_\_\_\_ animals conserve maximum water during excretion:**

- A) Ammonotelic  
B) Ureotelic  
C) Uricotelic  
D) Marine

☐ A ☐ B ☐ C ☐ D

**45) It is not associated with active uptake of a substance/s:**

- A) ADH  
B) Aldosterone  
C) Ascending limb of loop of Henle  
D) Descending limb of loop of Henle

☐ A ☐ B ☐ C ☐ D

**46) Secretion of antidiuretic hormone is inversely proportional to the:**

- A) Volume of urine  
B) Volume of sodium in urine  
C) Concentration of urine  
D) Concentration of urea in urine

☐ A ☐ B ☐ C ☐ D

**47) The outer layer of the kidney, where nephrons are located is called:**

- A) Renal hilus  
B) Renal pelvis  
C) Renal cortex  
D) Renal medulla

☐ A ☐ B ☐ C ☐ D

**48) Intercellular environment is also called as:**

- A) External environment  
B) Extracellular environment  
C) Intracellular environment  
D) Internal environment

☐ A ☐ B ☐ C ☐ D



## < TEST

Biology **Chemistry** Physics English

**51)** An atom or group of atoms which confers characteristics properties to an organic compound is called functional group. Which of the following is a functional group of thioalcohol?

- A)  $-\text{OH}$                       C)  $-\text{NH}_2$   
B)  $-\text{SH}$                       D)  $-\text{CHO}$

☐ A    ☐ B    ☐ C    ☐ D

**52)** Glucose and fructose are:

- A) Metamers of each other  
B) Functional group isomers of each other  
C) Tautomers of each other  
D) Chain isomers of each other

☐ A    ☐ B    ☐ C    ☐ D

**53)** Consider the following properties of organic compounds?

- I. Isomorphism  
II. Catenation  
III. Complexity of organic compounds  
IV. Isomerism

Which of the above statement is/are incorrect about organic compounds?

- A) I only                      C) II and IV  
B) II only                    D) I, II, III and IV

☐ A    ☐ B    ☐ C    ☐ D

**54)** On the basis of functional groups organic compounds can be divided into:

- A) Hydrocarbons only  
B) Derivatives of hydrocarbons only  
C) Both A and B  
D) Neither A nor B

☐ A    ☐ B    ☐ C    ☐ D

55) All of the following show functional group isomerism EXCEPT:

- A) Alcohols and ethers ( $\text{CH}_3\text{CH}_2\text{OH}$ ,  $\text{CH}_3\text{OCH}_3$ )
- B) Acids and esters ( $\text{CH}_3\text{COOH}$ ,  $\text{HCOOCH}_3$ )
- C) Aldehydes and ketones ( $\text{CH}_3\text{CH}_2\text{CHO}$ ,  $\text{CH}_3\text{COCH}_3$ ,  $\text{CH}_2=\text{CHCH}_2\text{OH}$ )
- D) Diethyl ether and 1-propanol ( $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ ,  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ )

☐ A    ☐ B    ☐ C    ☐ D

56) All of the following substances are inorganic in nature EXCEPT:

- A) Sodium carbonate
- B) Carbon disulphide
- C) Sugar
- D) Graphite

☐ A    ☐ B    ☐ C    ☐ D

57) All of the following are examples of heterocyclic compounds EXCEPT:

- A) Pyridine
- B) Toluene
- C) Pyrrole
- D) Furan

☐ A    ☐ B    ☐ C    ☐ D

58) 1-Butene and 2-butene show which of the following type of structural isomerism:

- A) Chain isomerism
- B) Position isomerism
- C) Metamerism
- D) Tautomerism

☐ A    ☐ B    ☐ C    ☐ D

59) Identify the incorrect statement:

- A) Organic means ... life or living
- B) Inorganic means ... lifeless (non-living source)
- C) Methane ... the simplest organic compounds
- D)  $\text{HCN}$  and  $\text{Na}_2\text{CO}_3$  ... organic compounds

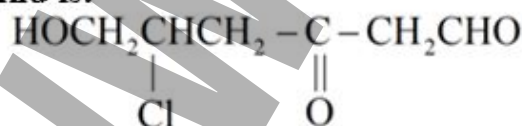
☐ A    ☐ B    ☐ C    ☐ D

60) In cis-trans isomerism, the trans-form shows all of the following properties EXCEPT:

- A) It is non-polar molecule
- B) It has higher boiling point
- C) It has higher melting point
- D) It is symmetrical

☐ A    ☐ B    ☐ C    ☐ D

61) The principal functional group of the following compound is:



- A)  $-\text{OH}$
- B)  $-\text{Cl}$
- C)  $-\text{CHO}$
- D)  $-\text{CO}-$

☐ A    ☐ B    ☐ C    ☐ D

62) Which of the following groups is always represented by prefixes in the nomenclature?

- A)  $-\text{NH}_2$
- B)  $-\text{CHO}$
- C)  $-\text{CN}$
- D)  $-\text{NO}_2$

☐ A    ☐ B    ☐ C    ☐ D

63) If a molecule contains more than one functional group, is known as:

- A) Derivative
- C) Poly-functional



B) Heterocyclic

D) Isomers

☐ A ☐ B ☐ C ☐ D

64) What will always be a characteristic of a compound containing a single carbon atom with four different groups bonded to it?

I. It will have an optical isomer.

II. It will have a chiral centre.

III. It will have a structural isomer.

Which of the above statements is/are correct?

A) I only

C) I and II only

B) II only

D) I, II and III

☐ A ☐ B ☐ C ☐ D

65) Which of the following alkenes does not show geometric isomerism?

A) 2-Butene

B) 1-Bromo-2-chloropropene

C) 1-Hexene

D) 2-Pentene

☐ A ☐ B ☐ C ☐ D

66) Which of the following statements is incorrect for tautomerism and resonance?

| Opt. | Tautomerism                                                            | Resonance                                                  |
|------|------------------------------------------------------------------------|------------------------------------------------------------|
| A)   | It involves a change in the position of an atom. (generally H).        | It usually involves delocalization of $\pi$ electron pair. |
| B)   | Tautomers are definite compounds and can be separated from each other. | Canonical forms are imaginary and cannot be separated.     |
| C)   | It have different functional groups.                                   | Various canonical forms have same functional group.        |
| D)   | It exist in static equilibrium.                                        | It involves dynamic equilibrium.                           |

☐ A ☐ B ☐ C ☐ D

67) In organic compound carbon atoms form:

A) Covalent bond

B) Ionic bond

C) Metallic bond

D) Co-ordinate covalent bond

☐ A ☐ B ☐ C ☐ D

68) Select from the following which one is alcohol:

A)  $\text{CH}_3\text{COOH}$

C)  $\text{CH}_3\text{OCH}_3$

B)  $\text{CH}_3\text{CH}_2\text{OH}$

D)  $\text{CH}_3\text{CH}_2\text{CHO}$

☐ A ☐ B ☐ C ☐ D

69) Which of the following represents the functional group of acid amides?

A)  $-\text{COOR}$

C)  $-\text{COX}$

B)  $-\text{CONH}_2$

D)  $-\text{COO}-$

☐ A ☐ B ☐ C ☐ D

70) Which of the following is organic compound?

A) Sodium cyanide

B) Carbon dioxide

C) Methanal

D) Ammonium cyanate

☐ A ☐ B ☐ C ☐ D

71) Which of the following is not type of structural isomerism?

- A) Metamerism
- B) Functional group isomerism
- C) Chain isomerism
- D) Cis-trans isomerism

☐ A ☐ B ☐ C ☐ D

72) Which of the following is/are types of organic reaction mechanism?

- A) Polar or ionic mechanism only
- B) Free radical mechanism only
- C) Both A and B
- D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

73) Which of the following compounds show geometrical isomerism?

- A)  $\text{CH}_3\text{-CH=CH}_2$       C)  $\text{CH}_3\text{-}\overset{\text{Br}}{\underset{|}{\text{C}}}=\overset{\text{Br}}{\underset{|}{\text{C}}}\text{-CH}_2\text{CH}_3$   
B)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH=CHCH}_3$       D) Both B and C

☐ A ☐ B ☐ C ☐ D

74) Consider the following properties of diastereoisomers:

- I. They have different melting point
- II. They have different boiling point
- III. They show different chemical reactivities toward most reagents
- IV. They have different solubilities

Which of the above statements is/are correct?

- A) I only
- B) II only
- C) II and III only
- D) I, II, III and IV

☐ A ☐ B ☐ C ☐ D

75) Which one of the following compounds does not show position isomerism?

- A) Dichlorobenzene
- B) Propanol
- C) Butene
- D) Propene

☐ A ☐ B ☐ C ☐ D

76) Which formula could represent a compound which has cis-trans isomers?

- A)  $\text{C}_2\text{H}_6\text{O}_2$
- B)  $\text{C}_2\text{H}_2\text{O}_4$
- C)  $\text{C}_2\text{H}_3\text{Cl}$
- D)  $\text{C}_2\text{H}_2\text{Cl}_2$

☐ A ☐ B ☐ C ☐ D

77) Which hydrocarbon can form a monochloro-substitution derivatives which shows both chirality and cis-trans isomerism?

- A)  $\text{CH}_3\text{CH=CH}_2$
- B)  $(\text{CH}_3)_2\text{C=CH}_2$
- C)  $\text{CH}_3\text{CH=C}(\text{CH}_3)_2$
- D)  $\text{CH}_3\text{CH=CHCH}_2\text{CH}_3$

☐ A ☐ B ☐ C ☐ D

78) Which of the following is a heterocyclic compound?

- A) Aniline
- B) Pyridine
- C) Styrene
- D) Toluene

☐ A ☐ B ☐ C ☐ D

79) Which of the following statements does not match correctly?

A)  $\text{--NO}_2$  ... nitro group

B)  $\text{--}\overset{\text{O}}{\parallel}\text{C--X}$  ... acid halide group

C)  $\text{--}\overset{\text{O}}{\parallel}\text{C--OH}$  ... carboxyl group

D)  $\text{>C=NH}$  ... amido group

☐ A ☐ B ☐ C ☐ D

80) Which one of the following shows metamerism?

A)  $\text{CH}_3\text{--CH}_2\text{CH=CH}_2$  and  $\text{H}_3\text{C--CH=CH--CH}_3$

B)  $\text{CH}_3\text{--CH}_2\text{CHO}$  and  $\text{CH}_3\text{COCH}_3$

C)  $(\text{CH}_3)_3\text{CH}$  and  $\text{CH}_3\text{--CH}_2\text{--CH}_2\text{--CH}_3$

D)  $\text{H}_3\text{C--NH--C}_3\text{H}_7$  and  $\text{C}_2\text{H}_5\text{--NH--C}_2\text{H}_5$

☐ A ☐ B ☐ C ☐ D

81) In which of the following hydrocarbons the central carbon atom is bonded with four carbon atoms?

A) Iso-butane

C) Cyclobutane

B) Neo-pentane

D) n-pentane

☐ A ☐ B ☐ C ☐ D

82) Xylene has possible number of isomers:

A) 2

C) 4

B) 3

D) 5

☐ A ☐ B ☐ C ☐ D

83) A compound X exhibits structural isomerism, the isomers being members of different homologous series. To which pair of isomers could X belong?

A) Acylchlorides and carboxylic acids

B) Carboxylic acids and esters

C) Amino acids and ammonium salts

D) Amides and amino acids

☐ A ☐ B ☐ C ☐ D

84) Which of the following is correct order of priority of various class of organic compounds while naming poly-functional organic compound?

A) Alkene, alkyne, halo, nitro

B) Nitro, halo, alkyne, alkene

C) Alkyne, halo, nitro, alkene

D) Halo, alkene, nitro, alkyne

☐ A ☐ B ☐ C ☐ D

85) Which of the following is incorrect statement about the class of organic compounds?

| Opt. | Class of organic compounds | Definition                                                             |
|------|----------------------------|------------------------------------------------------------------------|
| A)   | Acyclic                    | It is a type of compounds which contains an open chain of carbon atoms |



|    |              |                                                                                              |
|----|--------------|----------------------------------------------------------------------------------------------|
| B) | Alicyclic    | It is a type of homocyclic compounds which contains a ring of only four or more carbon atoms |
| C) | Aromatic     | It is a type of carbocyclic compounds which contains at least one benzene ring               |
| D) | Heterocyclic | It is a type of compounds in which the ring consists of atoms of more than one kind          |

☐ A
 ☐ B
 ☐ C
 ☐ D

PREVIOUS

FINISH TEST

NEXT



STEP

A PROJECT BY  
PUNJAB GROUP



## < TEST

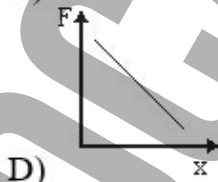
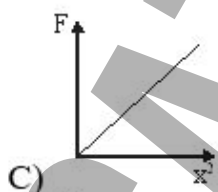
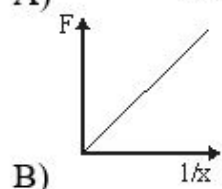
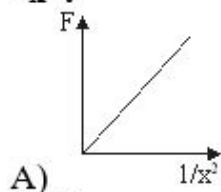
Biology Chemistry **Physics** English

- 86) An electric dipole is placed in a uniform electric field. The net electric force on the dipole:

A) Is always zero  
B) Can never be zero  
C) Depends on the orientation of the dipole  
D) Depends on the strength of the dipole

☐ A ☐ B ☐ C ☐ D

- 87) A point charge at a distance “x” from another point charge experiences a force of attraction. Which one of following graphs shows how the force is related to “x”.



☐ A ☐ B ☐ C ☐ D

- 88) The force between two charged spheres with charges  $q_1 = +8 \text{ C}$  and  $q_2 = -4 \text{ C}$  is 32 N. If these spheres are brought in contact and then separated, the new force between these spheres will be?

A) 16 N  
B) 4 N  
C) 64 N  
D) 256 N

☐ A ☐ B ☐ C ☐ D

- 89) The electric field strength produced by a charge “q” at a distance of “r” from the charge “q” (where there is present a test charge “ $q_0$ ”) is defined as:

A)  $\frac{\vec{F}}{q}$

C)  $\frac{\vec{F}}{q_0}$

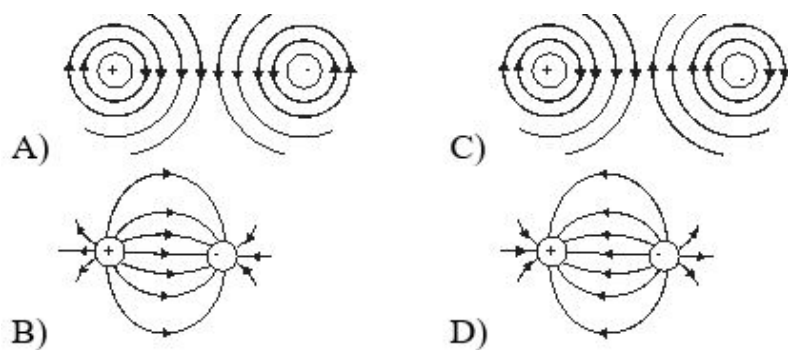
B)  $\frac{kq_0\vec{r}}{r^2}$

D) All of these

☐ A ☐ B ☐ C ☐ D

- 90) A positive charge and a negative charge of equal magnitude are placed at a short distance apart. Which diagram best represents the associated electric field?





- ☐ A    ☐ B    ☐ C    ☐ D

91) In bringing a positron towards a proton, the electrostatic potential energy of the system:

- A) Becomes zero                      C) Remains the same  
B) Decreases                          D) Increases

- ☐ A    ☐ B    ☐ C    ☐ D

92) Sixty-four drops of water of the same size are equally and similarly charged. They are then united to form a bigger drop. By what factor will the electrical potential change?

- A) 16 times                              C) 64 times  
B) 8 times                                D) 4 times

- ☐ A    ☐ B    ☐ C    ☐ D

93) The negative of potential gradient in an electric field region between two charged plates represents?

- A) Electric Potential energy stored in a charge  
B) Electric field strength between plates  
C) Work done on the charge  
D) Kinetic Energy gained by charge

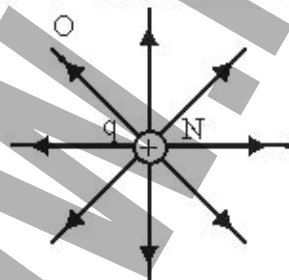
- ☐ A    ☐ B    ☐ C    ☐ D

94) Electric potential  $V$  at some point in space is zero. This means:

- A) Electric field at that point is necessarily zero  
B) Electric field at that point is necessarily non-zero  
C) Electric field at that point may or may not be non-zero  
D) None of these

- ☐ A    ☐ B    ☐ C    ☐ D

95) Two protons are placed near a point charge " $q$ " at point "N" and "O" as shown in diagram.



Which of following describe the force on both protons correctly?

|    | Magnitude of force on N | Direction of force |
|----|-------------------------|--------------------|
| A) | Less than force on O    | Radially outward   |
| B) | Greater than force on O | Radially outward   |
| C) | Less than force on O    | Radially Inward    |
| D) | Greater than force on O | Radially Inward    |

- ☐ A    ☐ B    ☐ C    ☐ D

96) Two opposite point charge of same magnitude  $q$  are separated by distance  $2d$ , electric potential mid-way between them is (if electric potential due to each charge is  $V$ ):

- A)  $V$                                       C)  $2V$



B) Zero

D)  $\frac{V}{2}$

☐ A ☐ B ☐ C ☐ D

97) The number of electrons or protons which constitutes a charge of ten coulomb is:

A)  $6.25 \times 10^{18}$

C)  $1.6 \times 10^{-19}$

B)  $6.25 \times 10^{19}$

D)  $1.6 \times 10^{19}$

☐ A ☐ B ☐ C ☐ D

98) Electron volt is the unit of:

A) Energy

C) Current

B) Charge

D) Electric Potential

☐ A ☐ B ☐ C ☐ D

99) The electric field intensity  $E$  is:

A) Directly related to the test charge

B) Directly related to the square of distance from the source charge

C) Directly related to the distance from the charge

D) Inversely related to the square of distance from the source charge

☐ A ☐ B ☐ C ☐ D

100) The ratio of electric field intensity due to infinite sheet of charges and two parallel oppositely charged plates is:

A) 1:2

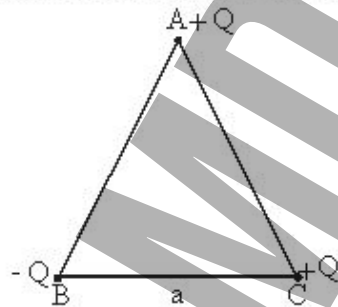
C) 2:3

B) 2:1

D) 3:2

☐ A ☐ B ☐ C ☐ D

101) Three charges are placed at the vertices of an equilateral triangle of side 'a' as shown in figure. The force experienced by the charge placed at the vertex A in a direction normal to BC is \_\_\_\_\_. Which charge exerts more force on the charge at vertex A?



A)  $\frac{Q^2}{(4\pi\epsilon_0 a^2)}$ , charge at vertex B

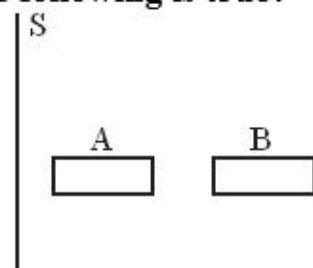
B)  $-Q^2 (4\pi\epsilon_0 a^2)$ , charge at vertex C

C) Zero, both exert equal force

D)  $\frac{Q^2}{(2\pi\epsilon_0 a^2)}$ , charge at vertex B exerts double force than charge at vertex C

☐ A ☐ B ☐ C ☐ D

102) A large non-conducting sheet S is given a uniform negative charge density. Two uncharged small metal plates A and B are placed near the sheet as shown. Which of the following is true?



A) S attracts A  
B) A attracts B

C) S attracts B  
D) All of these

☐ A ☐ B ☐ C ☐ D

- 103) A sphere of charge “+Q” is fixed in position. A smaller sphere of charge “+q” is placed near the larger sphere and released from rest. The smaller sphere will move away from larger sphere with \_\_\_\_\_ velocity and \_\_\_\_\_ slope of velocity time graph?

A) Decreasing, Increasing C) Increasing, Decreasing  
B) Increasing, increasing D) Increasing, Constant

☐ A ☐ B ☐ C ☐ D

- 104) If 6 N is the force between two charges when dielectric is present. Now if that dielectric of dielectric constant “ $\epsilon_r = \frac{3}{2}$ ” is removed, the new force will be:

A) 4 N C) 3 N  
B) 9 N D) 16 N

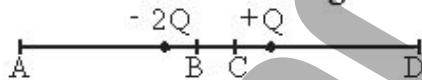
☐ A ☐ B ☐ C ☐ D

- 105) The electric field strength at the position  $\vec{r} = (4\hat{i} + 3\hat{j})\text{m}$  caused by a point charge of  $5\text{ }\mu\text{C}$  placed at origin is:

A)  $1240\hat{i} + 1080\hat{j}\text{ N C}^{-1}$  C)  $1440\hat{i} + 1080\hat{j}\text{ V m}^{-1}$   
B)  $1440\hat{i} + 1280\hat{j}\text{ N C}^{-1}$  D)  $1240\hat{i} + 1280\hat{j}\text{ N C}^{-1}$

☐ A ☐ B ☐ C ☐ D

- 106) Two-point charges “- 2Q” and “+ Q” are situated as shown in figure. At which point could the resultant electric field due to these charges be zero?



A) D C) C  
B) B D) A

☐ A ☐ B ☐ C ☐ D

- 107) Two charges of  $+5\text{ }\mu\text{C}$  each are kept at a distance of 5 m from each other. Their potential energy will be:

A)  $4.5 \times 10^{-3}\text{ J}$  C)  $4.5 \times 10^{-2}\text{ J}$   
B)  $9 \times 10^{-3}\text{ J}$  D)  $9 \times 10^{-9}\text{ J}$

☐ A ☐ B ☐ C ☐ D

- 108) A point charge “-q” is brought from a point “A” to another point “B”. The electric potential at “A” and “B” is  $V_1 = +5\text{ V}$  and  $V_2 = -3\text{ V}$ . The numerical value of work done on the charge is:

A) -3q C) -15q  
B) +5q D) +8q

☐ A ☐ B ☐ C ☐ D

- 109) The electric potential at a point 3.2 cm away from a singly ionized lithium atom will be:

A)  $4.5 \times 10^{-8}\text{ V}$  C)  $4.5 \times 10^{-6}\text{ V}$   
B)  $9 \times 10^{-8}\text{ V}$  D)  $9 \times 10^{-4}\text{ V}$

☐ A ☐ B ☐ C ☐ D

**110)** When a charge of 3 C is placed in a uniform electric field, it experiences a force of 3000 N, within this field, potential difference between two points separated by 1 cm is:

- A) 10 V  
B) 1000 V  
C) 90 V  
D) 3000 V

☐ A ☐ B ☐ C ☐ D

**111)** Two charges of 10  $\mu\text{C}$  and 14.4  $\mu\text{C}$  are 12 cm apart. The force between them:

- A) 0.01 N  
B)  $9 \times 10^3$  N  
C) 90 N  
D)  $9 \times 10^5$  N

☐ A ☐ B ☐ C ☐ D

**112)** If the distance between two equal charges is reduced to half and the magnitude of charges is also decreased to half, then the force between them will be:

- A) Remain same  
B) Decreased to half  
C) Increased to double  
D) Becomes four time

☐ A ☐ B ☐ C ☐ D

**113)** The units of electric potential is same as that of:

- A) Work  
B) Work per unit charge  
C) Electric field per unit charge  
D) Electric force per unit charge

☐ A ☐ B ☐ C ☐ D

**114)** The value of Coulomb's constant "K" depends upon:

- A) Nature of medium between two charges  
B) System of units  
C) Nature of charge bodies  
D) Nature of medium between two charges and system of units

☐ A ☐ B ☐ C ☐ D

**115)** When a charge +q is moving perpendicular to electric field, the force experienced is:

- A)  $qE$  and along the field  
B)  $qE$  and opposite to the field  
C)  $qE$  and perpendicular to the field  
D) Zero

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST

NEXT



## < TEST

Biology Chemistry Physics **English**

**116)** Directions: Fill in the blank with appropriate option.

\_\_\_\_\_ yesterday by Sessions judge against the suspected thief.

- A) Summonses were issued
- B) Summonses issued
- C) Summons were issued
- D) Summons issued

☐ A ☐ B ☐ C ☐ D

**117)** That university along with many other schools \_\_\_\_\_ efforts to encourage diversity in higher education.

- A) has been made
- B) has made
- C) have been made
- D) have made

☐ A ☐ B ☐ C ☐ D

**118)** The police \_\_\_\_\_ also present at a great big hall to inquire about Mr. James' lost leather pocket book from Mr. Hubert who were seen to pick up the pocketbook by Mr. Manana.

- A) Were
- B) Were being
- C) Was
- D) Was being

☐ A ☐ B ☐ C ☐ D

**119)** The woman did not watch the boy to see if he was going to run now, \_\_\_\_\_ purse, which she had left behind her on the daybed.

- A) Nor did she watch hers
- B) Nor did she watch her
- C) Or she watched her
- D) Nor she watched her

☐ A ☐ B ☐ C ☐ D

**120)** Despite the dilapidated exterior of the restaurant, \_\_\_\_\_ always impressive; that's why, its small dining room is always crowded.

- A) The number of quality meals is being
- B) The number of quality meal is
- C) The number of quality meals is
- D) A number of quality meals is

☐ A ☐ B ☐ C ☐ D

121) Strolling across the playing fields of Brookfield \_\_\_\_\_ a chance to exchange a few words with the boys and invite them to tea with him during their first term.

- A) is the only one of Mr. Chips' favorite activities which provide him
- B) is the only one of Mr. Chips' favorite activity which provides him
- C) is the only one of Mr. Chips' favorite activities which provides him
- D) are the only one of Mr. Chips' favorite activities which provides him

☐ A    ☐ B    ☐ C    ☐ D

122) On arriving the stadium where a circus was in full swing, people found \_\_\_\_\_ wait for a long time.

- A) That there was neither the clowns nor the ringmaster present for whom they had to
- B) That there was neither the ringmaster nor the clowns present for whom they had
- C) That there were neither the ringmaster nor the clowns present for whom they had to
- D) That there was neither the ringmaster nor the clowns present for whom they had to

☐ A    ☐ B    ☐ C    ☐ D

123) Ninety percent of our team \_\_\_\_\_ the same for the upcoming season.

- A) Who played last year remained
- B) Who played last year remain
- C) Which played last year remain
- D) Who played last year remains

☐ A    ☐ B    ☐ C    ☐ D

124) According to the Martin Luther King, to judge one by the content of character and not by the colour of one's skin \_\_\_\_\_ for evaluating one's personality.

- A) is the main criterion    C) are the main criteria
- B) are the main criterion    D) is the main criteria

☐ A    ☐ B    ☐ C    ☐ D

125) The mayor, who has been convicted along with his four brothers on four counts of various crimes but who also \_\_\_\_\_ to jail.

- A) Seem, like a cat, to have several political lives, are finally going
- B) Seems, like a cat, to have several political lives, are finally going
- C) Seems, like a cat, to have several political lives, is finally going
- D) Seems, like a cat, to have several political lives, is finally gone

☐ A    ☐ B    ☐ C    ☐ D

126) Directions: Pick the correct option.

- A) Each of my friends except me who am staying home to work on my family's farms is going on vacation this summer.
- B) Each of my friends except I who am staying home to work on my family's farms is going on vacations this summer.
- C) Each of my friends except me who is staying home to work on my family's farms is going on vacation this summer.
- D) Each of my friends except me who am staying home to work on my family's farms are going



D) Each of my friends except me who am staying home to work on my family's farms are going on vacation this summer.

☐ A ☐ B ☐ C ☐ D

- 127) A) Many a boys attempt seriously to make good, and really have the native ability to do so.  
B) Many boys attempt seriously to make good, and really has the native ability to do so.  
C) Many boys attempt seriously to make good, and really have the native ability to do so.  
D) Many a boy attempts seriously to make good, and really have the native ability to do so.

☐ A ☐ B ☐ C ☐ D

- 128) A) My doctor told me to spend more time gardening, watching movies, and playing board games, because doing things that make me feel good are actually good for my health.  
B) My doctor told me to spend more time gardening, watching movies, and playing board games, because doing things that make me feel good is actually good for my health.  
C) My doctor told me to spend more time gardening, watching movies, and playing board games, because doing things that makes me feel good is actually good for my health.  
D) My doctor told to spend more time gardening, watching movies, and playing board games, because doing things that make me feel well is actually good for my health.

☐ A ☐ B ☐ C ☐ D

- 129) A) Carefully crafted plots and a brilliantly developed mane character is what makes the book so compelling.  
B) Carefully crafted plots and a brilliant developed main character are what make the book so compelling.  
C) Carefully crafted plots and a brilliantly developed main character is what makes the book so compelling.  
D) Carefully crafted plots and a brilliantly developed main character are what makes the book so compelling.

☐ A ☐ B ☐ C ☐ D

- 130) A) In the end, neither Shahbaz nor his friends who were very adept gold diggers were able to discover where the treasure was buried.  
B) In the end, neither Shahbaz nor his friends who were very adept gold diggers was able to discover where the treasure was buried.  
C) In the end, neither Shahbaz nor his friends who was very adept gold diggers was able to discover where the treasure was buried.  
D) In the end, neither Shahbaz nor his friends who were very adept gold diggers was able to discover where the treasure were buried.

☐ A ☐ B ☐ C ☐ D

- 131) A) The minister and custodian use censorship to control the types of books sold in the church bookstore.  
B) The minister and custodian uses censorship to control the types of books sold in the church bookstore.  
C) The minister and custodian uses censorship to control the types of book sold in the church bookstore.  
D) The minister and custodian uses censorship to control the types of books sells in the church bookstore.

☐ A ☐ B ☐ C ☐ D

- 132) A) As fall and winter's chill settle in, there are some who watch in awe as thousands of snow geese soar along the Atlantic flyway migrating from their Arctic breeding grounds.  
B) As fall and winter's chill settles in, there is some who watch in awe as thousands of snow geese soar along the Atlantic flyway migrating from its Arctic breeding grounds.  
C) As fall and winter's chill settles in, there are some who watch in awe as thousands of snow geese soar along the Atlantic flyway migrating from their Arctic breeding grounds.  
D) As fall and winter's chill settles in, there are some who watch in awe as thousands of snow geese soars along the Atlantic flyway migrating from their Arctic breeding grounds.

☐ A ☐ B ☐ C ☐ D

- 133) A) Whenever the debatable topic of opportunity versus determination is discussed, a sizable majority feel that opportunity is required for success, and millions never have it; just a minority of the participants feel that only determination is needed.  
B) Whenever the debatable tonic of opportunity versus determination is discussed a sizable



- B) Whenever the debatable topic of opportunity versus determination is discussed, a sizable majority feels that opportunity is required for success, and millions never have it; just a minority of the participants feel that only determination is needed.
- C) Whenever the debatable topic of opportunity versus determination is discussed, a sizable majority feels that opportunity is required for success, and millions never have it; just a minority of the participants feel that only determination is needed.
- D) Whenever the debatable topic of opportunity versus determination is discussed, a sizable majority feels that opportunity is required for success, and millions never has it; just a minority of the participants feel that only determination is needed.

☐ A ☐ B ☐ C ☐ D

- 134) A) That John Keats, who dedicated himself to the perfection of poetry, were one of the most talented and main figure of the second generation of Romantic poets is an understatement to those who are really familiar with the field of poetry and literature.
- B) That John Keats, who dedicated himself to the perfection of poetry, was one of the most talented and main figures of the second generation of Romantic poets are an understatement to those who are really familiar with the field of poetry and literature.
- C) That John Keats who dedicated himself to the perfection of poetry was one of the most talented and main figures of the second generation of Romantic poets is an understatement to those who is really familiar with the field of poetry and literature.
- D) That John Keats, who dedicated himself to the perfection of poetry, was one of the most talented and main figures of the second generation of Romantic poets is an understatement to those who are really familiar with the field of poetry and literature.

☐ A ☐ B ☐ C ☐ D

- 135) A) Most of the audience who was there seemed to be enjoying the music more than those who sat inside, for they were listening in silence though the music was foreign.
- B) Most of the audience which were there seemed to be enjoying the music more than those who sat inside, for they were listening in silence though the music was foreign.
- C) Most of the audience which was there seemed to be enjoying the music more than those who sat inside, for it was listening in silence though the music was foreign.
- D) Most of the audience who were there seemed to be enjoying the music more than those who sat inside, for it was listening in silence though the music was foreign.

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST